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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,987	05/05/2006	Brent E. Green	7865-218 MIS;jb	7282

24223 7590 02/09/2009

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EXAMINER	
ML, QIUWEN	
ART UNIT	PAPER NUMBER
1655	
MAIL DATE	DELIVERY MODE
02/09/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,987	GREEN ET AL.	
	Examiner	Art Unit	
	QIUWEN MI	1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19,20,22-26 and 28-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19,20,22-26 and 28-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/26/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

CONTINUED EXAMINATIONS

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/17/08 has been entered.

Applicant's amendment in the reply filed on 9/26/08 is acknowledged, with the cancellation of Claims 1-18, 21, 27, and 55-64. Claims 19, 20, 22-26, and 28-54 are pending. **Claims 19, 20, 22-26, and 28-54 are examined on the merits.**

Any rejection that is not reiterated is hereby withdrawn.

Claim Objections

Claim 52 is objected to because of the following informalities: Claim 52 recites "bout" in line 2, which is a typo. The correct spelling should be "about".

Claim Rejections –35 USC § 112, 2nd

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 20, 22-26, and 28-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims recite the following limitations, and there is insufficient antecedent basis for these limitations in the claims.

"the resulting slurry" in claim 19, line 5;

"the slurry" in claim 19, line 7;

"the protein" in claim 19, lines 8-9; and in claim 26, line 3;

"the protein concentration" in claim 19, line 12; and claim 26, line 7;

"the ionic strength" in claim 19, line 13; and claim 26, line 8;

"the formation" in claim 19, line 16; and in claim 26, line 14;

"the aqueous phase" in claim 19, line 17; and in claim 26, line 15;

"the permeate" in claim 26, line 12;

"the treated oil seeds" in claim 50, line 3;

"the range" in claim 29, line 2; claim 30, line 2; and in claim 41, line 2.

In addition, the metes and bounds of the following recitations are vague and indefinite:

"below about 15 °C" in claim 19, line 16;

"at least about 90 wt%" in claim 19, line 21;

"below about 50 °C" in claim 24, line 2;

"below about 100 °C" in claim 25, lines 2-3;

"below about 15 °C" in claim 26, line 14;

"at least about 90 wt%" in claim 26, line 19;

"below about 50 °C" in claim 51, line 2;

"below about 100 °C" in claim 52, line 2.

For instance, on the surface, "below about 15 °C" should be construed as a temperature lower than 15 °C. However, 17°C is "about 15 °C", so 16 °C could also be interpreted as "below about 15 °C".

Therefore, the metes and bounds of claims are rendered vague and indefinite. The lack of clarity renders the claims very confusing and ambiguous since the resulting claims do not clearly set forth the metes and bounds of the patent protection desired.

All other cited claims depend directly or indirectly from rejected claims and are, therefore, also, rejected under U.S.C. 112, second paragraph for the reasons set forth above.

Claim Rejections –35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19, 20, 22-26, and 28-54 are newly rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (US 6,005,076) in view of Jones et al (US 4,158,656), and Jones et al

(US 6,146,669), and further in view of Diosady et al (US 2003/0060607), Maenz et al (US 6800,308), and Holbrook et al (US 6,132,795).

Murray discloses a method for oil seed protein extraction (see the entire document). Murray teaches extracting rapeseed meal with an aqueous food grade salt solution at a pH of about 5-6.8 at a temperature of about 5-35 °C (col 8, lines 30-40); the extracting step is effected for about 10-60 min (col 8, lines 63-66); the crude protein solution was then chilled to 6 °C for 16 h (col 7, lines 5-8); separating the aqueous protein solution from residual oil seed meal; removing fat from the aqueous protein solution by chilling said aqueous protein solution to a temperature below about 15 °C (col 9, lines 21-26); the fat is separated by decanting, centrifugation and /or fine filtration (claim 7); the supernatant was diafiltered (since the pH was not altered, it is about 5-6.8 as instantly claimed) (col 7, lines 45-50), and then concentrated by using a selective ultrafiltration membrane with a molecular weight cut-off of 30,000 (col 7, lines 10-15; claim 13) at a temperature of about 20-45 °C (claim 15); increasing the protein concentration of said defatted protein solution while maintaining the ionic strength thereof substantially constant to form a concentrated defatted protein solution (claim 1d); it is preferred to use a volume reduction factor of about 3.0-about 10 (col 4, lines 55-60); the high protein liquid extract was diluted 10 fold in tap water (6 °C) (col 7, lines 19-21), diluting the concentrated defatted protein solution to cause the formation of discrete protein particles in the aqueous phase (claim 8e, col 9, lines 32-36); settling the protein micelles to form a mass of protein isolate in the form of an amorphous sticky gelatinous, gluten-like protein micellar mass (claim 8f, col 8, lines 52-57); the micellar mass was allowed to settle for 4 h at 3 °C (col 7, lines

50-55); the dry (desolventized) protein micellar mass has a protein content, usually in excess of about 90% protein (calculated as kjeldahl N x 6.25) (col 6, lines 34-38). See Example 2 in particular. Murray states "ultrafiltration and similar selective membrane techniques permit low molecular weight species to pass there through while preventing higher molecular weight species from so doing. The low molecular weight species include not only the ionic species of the food grade salt but also low molecular weight materials extracted from the source material, such as, carbohydrates, pigments (the same as colour) etc. The molecular weight cut-off of the membrane is usually chosen to ensure retention of substantially all of the proteins in the solution" (col 5, lines 12-22).

Murray does not teach washing canola oil seed meal with an alcohol (ethanol) till no visible color is recovered, claimed alcohol washing time 5-60 min, diafilatration solution contains an antioxidant (ascorbic), the claimed diafiltration solution volume 2-10, or 5-10, pasteurizating step (including the temperature about 55-about 70 °C, and the time 10-15 min), the any claimed amounts of antioxidant, 5000-10,000 dalton molecular membrane for diafiltration, extracting dried canola protein isolate with aqueous alcoholic solution, air-desolventized at a temperature below about 50 or 100 °C, or using claimed amount of PVP as color-adsorbing agent.

Jones et al (US 4,158,656) teach a process for producing protein concentrate product from rapeseed (see Abstract). Jones et al indicate that the problem is that the rapeseed contains numerous phenolic compounds which are readily oxidized and polymerized to condensed tannins which yield dark brown-black pigments. These can cause an unattractive coloration and

undesirable flavour in the food into which they are incorporated and, further, these phenolic compounds can be strongly bound to the protein and thereby diminish the nutritive value of the product (col 3, lines 25-33). The glucosinolates contained in rapeseed are hydrolysed by myrosinase under the appropriate conditions to isothiocyanates, nitriles, and oxazolidinethiones some of which are known to cause goiter. Rapeseed also contains a yellow pigment, the color intensity of which is very much enhanced in alkaline environments, and such coloration is highly undesirable in many food products (col 3, lines 38-47). Jones et al further teach that it is known that thioglucodies can be removed from crushed oilseed by aqueous extraction following a myrosinase inactivating water treatment (col 1, lines 15-24). Phenolics in the rapeseed flour are easily oxidized in alkaline and neutral solutions in the presence of oxygen and it is therefore essential that the extractions should be conducted in a non-oxidizing medium. It is preferable that the solution contains an antioxidant, such as sulphur dioxide, or ascorbic acid (col 4, lines 65-67; col 5, lines 1-5). Jones et al also teach contacting seed material (rapeseed, claim 10) with an aqueous lower alkanol solvent solution (such as ethanol etc, claim 6) (at 20-50 °C) (solvent to solid ratios in the order of 4-10:1, col 4, lines 52-57) to thereby selectively extract glucosinolates, phenolic compounds and pigments therefrom at a temperature below 60 °C and under conditions so as to prevent oxidation of said phenolic compound and inhibiting enzymic degradation of glucosinolates; separating the liquid extract phase from a solid residue, drying (desolventized) the solid residue a at temperature below about 60 °C (thus below 100 °C) to thereby recover said protein concentration (claim 1). Jones et al further teach that it is known that thioglucodies can be removed from crushed oilseed by aqueous extraction following a myrosinase inactivating water treatment (col 1, lines 15-24). Jones et al further teach the desired product can be produced

by selectively removing the glucosinolates, phenolics, and yellow pigmentation by solubilization in aqueous alcohol solutions whilst retaining the protein in an insoluble state, and under conditions whereby the oxidation of phenolics is avoided during the processing, the water solubility of the protein retained and whereby enzyme activity is inhibited so that the glucosinolates are retained intact. The soluble and insoluble phases are separated and the protein concentrate is recovered (col 2, lines 60-70; col 3, lines 1-4). Jones et al further teach when significant amounts of chlorophyll are present in the seed we have found it advantageous to effect a prior extraction using the selected alcohol alone (col 4, lines 63-67). Jones et al at least teach contacting seed material (rapeseed, claim 10) with an aqueous lower alkanol solvent solution (such as ethanol etc, claim 6) (at 20-50 °C) (thus overlaps with the claimed range of 15-45 °C) (solvent to solid ratios in the order of 4-10:1, col 4, lines 52-57) (thus overlaps with the claimed range of 1:3 to 1:10) to thereby selectively extract glucosinolates, phenolic compounds and pigments therefrom at a temperature below 60 °C and under conditions so as to prevent oxidation of said phenolic compound and inhibiting enzymic degradation of glucosinolates; separating the liquid extract phase from a solid residue, drying (desolventized) the solid residue a at temperature below about 60 °C to thereby recover said protein concentration (claim 1).

Jones et al (US 6,146,449) teach a method for preparing the high protein nutrient from oilseed-based material. Jones et al indicate that after forming the modified oilseed product, it is typically advisable to pasteurize the material to ensure that microbial activity is minimized. The modified oilseed product may be pasteurized, e.g., by raising the internal temperature of the

product to about 75 °C (thus about 70 °C), or above and maintaining that temperature for about 10-15 minutes (col 8, lines 42-50).

Diosady et al teach phenolic compounds impart an unpleasant bitter taste and a dark color to the final protein products [0003], and the extraction solution comprising the soluble protein fraction may be treated with an insoluble form of polyvinylpyrrolidone (PVP). PVP is a specific adsorbent for polyphenols [0116]. The PVP treatment reduced the phenolic acid content in the acidic SPI by more than 50% [0152]. Diafiltration was then conducted at a DV of 5 with water containing 0.1% w/v Na.sub.2SO.sub.3 as an antioxidant [0167]. The treated solution was ultrafiltered at a CF of 4 and then diafiltered at a DV (diavolume) of 5 (thus overlaps with the claimed range of 2-10 or 5-10). The concentrated and further purified proteins in the solution were also freeze-dried to produce SPI. The products were analyzed for protein, glucosinolates, phenolic acids, and condensed tannins [0167].

Maenz et al teach processing canola meal, and Maenz et al state the precipitated protein was separated from remaining solubles by centrifugation. The soluble protein was concentrated by ultrafiltration and diafiltration using a 10,000 molecular weight cut-off membrane (thus overlaps with the claimed range of 500-10,000 dalton) (col 3, liens 55-61).

Holbrook et al teach that vegetable protein concentrate or vegetable protein isolate is an alcohol extract or washed material since alcohol extraction provides a protein material especially suitable for use in a food material (col 5, lines 15-20). Holbrook et al also teach that vegetable materials which contain protein and isoflavones include oilseeds such as rapeseed etc (col 8, lines 64-67; col 9, lines 1-5).

It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the antioxidant ascorbic acid in extracting process, wash rapeseeds with ethanol till no visible color is recovered, and inactivating myrosinase in Jones et al (US 4,158,656) due to the teaching in Jones et al as mentioned above. It would also have been obvious for one of ordinary skill in the art to wash the canola seed meal with alcohol, since Jones et al teach the desired product can be produced by selectively removing the glucosinolates, phenolics, and yellow pigmentation by solubilization in aqueous alcohol solutions. In addition, Jones et al teach contacting seed material (rapeseed, claim 10) with an aqueous lower alkanol solvent solution, and canola seed meal if a seed material. It would also have been obvious for one of ordinary skill in the art to use alcohol instead of aqueous alcohol, since Jones et al teach when significant amounts of chlorophyll are present in the seed we have found it advantageous to effect a prior extraction using the selected alcohol alone (col 4, lines 63-67). It would also have been obvious for one of ordinary skill in the art to dry (desolventized) the solid residue at temperature below about 60 °C (thus about 50 °C, thus below 100 °C) to thereby recover said protein concentration, since Jones teaches separating the liquid extract phase from a solid residue, drying (desolventized) the solid residue a at temperature below about 60 °C to thereby recover said protein concentration (claim 1).

It would also have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to pasteurization step (including the temperature and time) in Jones et al

(US 6,146,449) as Jones et al teach that it is typically advisable to pasteurize the material to ensure that microbial activity is minimized.

It would also have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the PVP in Diosady et al since Diosady et al teach phenolic compounds impart a dark color to the final protein products, and PVP is a specific adsorbent for polyphenols. It would also have been obvious for one of ordinary skill in the art to use the diafilatration solution contains an antioxidant (ascorbic), and the claimed diafiltration solution volume since Diosady et al teach diafiltration was then conducted at a DV of 5 with water containing 0.1% w/v Na.sub.2SO.sub.3 as an antioxidant. It would also have been obvious for one of ordinary skill in the art to use dilfiltration till no significant quantities of phenolics and colors are present in the permeate, since Diosady et al teach the PVP treatment reduced the phenolic acid content, and phenolic compounds impart a dark color.

It would also have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the claimed molecular weight cut-off membrane 5000-10,000 dalton, or 3000-50,000 dalton from Maenz et al since Maenz et al teach the soluble protein was concentrated by ultrafiltration and diafiltration using a 10,000 molecular weight cut-off membrane, which overlaps with the claimed range.

It would also have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to extract canola protein isolate with aqueous alcoholic solution from

Holbrook et al since Holbrook et al teach that alcohol extraction provides a protein material especially suitable for use in a food material.

Since all the inventions yielded beneficial results in food industry, especially in processing canola material, one of ordinary skill in the art would have been motivated to make the modifications to combine them together.

Regarding the limitation to the amount of antioxidant, PVP, the canola meal washing time 5-60 min, the result-effective adjustment in conventional working parameters is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan. It would have been obvious for one of the ordinary skills in the art to vary the amount of antioxidant during the canola protein isolation according to the temperature at which the isolation procedure is performed, or the volume of the solvent that is used during the protein isolation process. It would have been obvious for one of the ordinary skills in the art to vary the amount of PVP during the canola protein isolation according to different source of canola raw material that may contain different amount of phenolic compounds. It would have been obvious for one of the ordinary skills in the art to vary the canola meal washing time according to the sample size. Thus, the amount of antioxidant, PVP, and canola meal washing time are result-effective variable that is subject to adjustment.

It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. The differences in concentration or temperature will not support the patentability of subject matter

encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.); see also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). see MPEP § 2144.05 part II A. Although the prior art did not specifically disclose the exact amounts of each constituent, temperature, pH, canola meal washing time, or so on, it would have been obvious to one of ordinary skill in the art at the time Applicants' invention was made to determine all operable and optimal concentrations of components because they are art-

recognized result effective variables, which would have been routinely determined and optimized in the pharmaceutical art.

Regarding the new limitation "the sequential steps of" in amended claim 26 (line 2), as discussed in MPEP § 2144, if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court. Examples directed to various common practices which the court has held normally require only ordinary skill in the art and hence are considered routine expedients are discussed below". In the instant case, Ex parte Rubin, 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render prima facie obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious). Therefore, although the cited references do not explicitly the claimed sequential steps in claim 26, selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

Answer to Applicant's Argument

Applicant's arguments with respect to the previous 103 rejections have been considered but are moot in view of the new ground(s) of rejection, except the following arguments:

Regarding the new limitation "the sequential steps of" in amended claim 26 (line 2) (page 8, paragraphs 3-8 bridging page 9), "As discussed in MPEP § 2144, if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court. Examples directed to various common practices which the court has held normally require only ordinary skill in the art and hence are considered routine expedients are discussed below". In the instant case, Ex parte Rubin, 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render prima facie obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious). Therefore, although the cited references do not explicitly the claimed sequential steps in claim 26, selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results.

Regarding the pH of diafiltration solution in Murray (page 9, 3rd paragraph), since no pH adjustment occurred after extraction, it is deemed that the diafiltration is conducted at the same pH as the extraction process, which is 5-6.8 as instantly claimed.

Applicant argues that Murray or Jones '656 do not teach claims 38-45: The supernatant from the deposition of the canola protein isolate insolate is processed to produce a further canola protein isolate. However, "The supernatant from the deposition of the canola protein isolate insolate is processed to produce a further canola protein isolate" are not in claims 38-45.

Applicant argues that Murray or Jones '656 do not teach claims 51 and 52 (page 13, paragraphs 1-2).

This is not found persuasive. As indicated above, it would also have been obvious for one of ordinary skill in the art to dry (desolventized) the solid residue at temperature below about 60 °C (thus about 50 °C, thus below 100 °C) to thereby recover said protein concentration since Jones teaches separating the liquid extract phase from a solid residue, drying (desolventized) the solid residue a at temperature below about 60 °C to thereby recover said protein concentration (claim 1).

Applicant argues that Applicants use an alcohol, not an aqueous alkanol solution as in Jones '656 to extract phenolics and /or visible color from canola oil seed meal.

This is not found persuasive. As indicated above, it would also have been obvious for one of ordinary skill in the art to use alcohol instead of aqueous alcohol, since Jones et al teach when significant amounts of chlorophyll are present in the seed we have found it advantageous to effect a prior extraction using the selected alcohol alone (col 4, lines 63-67).

Applicant argues that Jones '656 does not teach specific conditions for extraction of canola oil seed meal.

This is not found persuasive. As indicated above, Jones et al teach contacting seed material (rapeseed, claim 10) with an aqueous lower alkanol solvent solution (such as ethanol etc, claim 6) at 20-50 °C (thus overlaps with the claimed range of 15-45 °C) at solvent to solid ratios in the order of 4-10:1, col 4, lines 52-57 (thus overlaps with the claimed range of 1:3 to 1:10) to thereby selectively extract glucosinolates, phenolic compounds and pigments.

Applicant argues that the procedure described in Jones '669 is wholly different from applicant's process of preparing a canola protein isolate, and nothing in the reference would cause a person skilled in the art to modify the process by incorporating the pasteurization.

This is not found persuasive. Jones '669 teaches a method of processing oilseed material including canola oil seed. It would also have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to pasteurization step (including the temperature and time) from Jones et al (US 6,146,449) as Jones et al teach that it is typically advisable to pasteurize the material to ensure that microbial activity is minimized.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qiuwen Mi whose telephone number is 571-272-5984. The examiner can normally be reached on 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Qiuwen Mi/

Examiner, Art Unit 1655